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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/008,455	11/02/2001	Kirk Hibbert	7432.115USU1	4982
23552	7590	06/23/2004	EXAMINER	
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			TO, TOAN C	
			ART UNIT	PAPER NUMBER

3616

DATE MAILED: 06/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/008,455

Applicant(s)

HIBBERT, KIRK

Examiner

Toan C To

Art Unit

3616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-29, 32, 33 and 36-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12, 13, 18, 24, 26, 27, 32, 33, 38-43 and 46-50 is/are rejected.
- 7) ☒ Claim(s) 14-17, 19-23, 25, 28, 29, 36, 37, 44 and 45 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3-12-2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Examiner's Note

1. In reviewing the prior art as to Sakai (U.S. 5,486,018), the examiner notes that the original dependent claim 12 still read on the prior art as to Sakai. Therefore, the indicated allowability of claim 12 in previous Office Action is now withdrawn in view of reconsideration. The examiner apologizes for any inconvenience may cause.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the compression spring as recited in claim 41 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 18, 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Recitation "said remote reservoir piston is at least partially extended from said remote reservoir mechanism" in claim 18 renders the claim indefinite for being unclear, since it is not known how the reservoir piston 92 is extended from the reservoir mechanism while in fact the piston 92 is disposed within the reservoir mechanism.

Recitation "fourth hydraulic chamber" in claim 26 lacks of antecedent basis.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 12-13, 18, 24, 26-27, 32, 38-39, 42, 46 and 48-49 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakai (U.S. 5,486,018).

Sakai discloses a vehicle suspension system (figures 14-17) comprising a first shock absorber (102, left shock absorber in figure 17) comprising a first main piston (112) disposed therein, the first main piston being moveable between a retracted position wherein the first main piston is substantially retracted within the first shock absorber and an extended position wherein the first main piston is at least partially extended from the first shock absorber; a second shock absorber (102, right shock absorber in figure 17) comprising a second main piston (112) disposed therein, the second main piston being moveable between a retracted position wherein the second main piston is substantially retracted within the second shock absorber and an extended

position wherein the second main piston is at least partially extended from the first shock absorber; wherein the first and second shock absorbers motively linked with one another whereby when the first main piston is moved toward the retracted position, the second main piston is caused to move toward the retracted position; wherein the first shock absorber is a hydraulic shock absorber defining a first hydraulic chamber (P1) therein, wherein a volume of the first hydraulic chamber is smaller when the first main piston is in said retracted position than when the first main piston is in the extended position; the second shock absorber is a hydraulic shock absorber defining a second hydraulic chamber (P2) therein, wherein increasing a volume of the second hydraulic chamber causes the second main piston to move toward said retracted position; and the second hydraulic chamber being in hydraulic communication with said first hydraulic chamber, wherein decreasing the volume of the first hydraulic chamber (P1) increasing the volume of the second hydraulic chamber (P2); whereby when the first main piston is moved towards said retracted position, the volume of said first hydraulic chamber (P1) is decreased, whereby the volume of the second hydraulic chamber is increased, whereby said second main piston moves toward said retracted position.

As to claim 13, Sakai discloses a vehicle suspension system wherein the second shock absorber (right shock absorber in figure 17) defines a third hydraulic chamber (107) therein adjacent to the second hydraulic chamber (P2), wherein increasing the volume of the second hydraulic chamber decreases a volume of the third hydraulic chamber (107).

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As to claim 18, Sakai discloses a vehicle suspension system comprising a remote reservoir mechanism (115) adapted to accommodate motions of the first and second main pistons (112), the remote reservoir mechanism comprising a remote reservoir piston (122) disposed in the remote reservoir mechanism, the remote reservoir piston (122) being moveable between a retracted position wherein the remote reservoir piston is substantially retracted within the remote reservoir mechanism and an extended position; the remote reservoir mechanism (115) defining a fifth hydraulic chamber (155) therein in hydraulic communication with the third hydraulic chamber (107), such that decreasing the volume of the third hydraulic chamber (107) increases a volume of the fifth hydraulic chamber (155); the remote reservoir mechanism defining a pressure means chamber (129) therein in communication with the fifth hydraulic chamber (155), such that increasing the volume of said fifth hydraulic chamber decreases a volume of the pressure means chamber (129).

As to claims 24, 26-27, Sakai discloses a vehicle suspension system comprising a first hydraulic line (118) connecting the first and second hydraulic chambers (P1, P2), a second hydraulic line (302) connecting the second and fourth hydraulic chambers (P2, P3), a third hydraulic line (119) connecting the third and fifth hydraulic chambers (107, 155).

As to claim 32, Sakai discloses a vehicle suspension system, wherein the third and fifth hydraulic chambers (107, 155) are substantially filled with a hydraulic fluid.

As to claims 38-39, Sakai discloses a vehicle suspension system, wherein the pressure means chamber is substantially filled with a pneumatic fluid, wherein the pneumatic fluid is compressed nitrogen (see column 7, lines 35-40).

As to claims 42, and 46 Sakai discloses a vehicle suspension system, wherein at least one of the first and second shock absorber comprises at least one O-ring (column 7, lines 9-10); and the remote reservoir mechanism comprises at least one o-ring (123)

As to claims 48-49, Sakai discloses a vehicle suspension system further comprising: a restrictor (287) between the first and second hydraulic chambers, the restrictor being adapted to control fluid communication between the first and second hydraulic chambers; and a bleed-back valve (108) between the third and fifth hydraulic chamber to control fluid communication therebetween.

7. Claim 50 is rejected under 35 U.S.C. 102(b) as being anticipated by Sakai (U.S. 5,486,018).

Sakai discloses a vehicle suspension system (figures 14-17) comprising a first shock absorber (102, left shock absorber in figure 17) comprising a first main piston (112) disposed therein, the first main piston being moveable between a retracted position wherein the first main piston is substantially retracted within the first shock absorber and an extended position wherein the first main piston is at least partially extended from the first shock absorber; a second shock absorber (102, right shock absorber in figure 17) comprising a second main piston (112) disposed therein, the second main piston being moveable between a retracted position wherein the second main piston is substantially retracted within the second shock absorber and an extended

position wherein the second main piston is at least partially extended from the first shock absorber; wherein the first and second shock absorbers motively linked with one another whereby when the first main piston is moved toward the retracted position, the second main piston is caused to move toward the retracted position; wherein the first shock absorber is a hydraulic shock absorber defining a first hydraulic chamber (P1) therein, wherein a volume of the first hydraulic chamber is smaller when the first main piston is in said retracted position than when the first main piston is in the extended position; the second shock absorber is a hydraulic shock absorber defining a second hydraulic chamber (P2) therein, wherein increasing a volume of the second hydraulic chamber causes the second main piston to move toward said retracted position; and the second hydraulic chamber being in hydraulic communication with said first hydraulic chamber, wherein decreasing the volume of the first hydraulic chamber (P1) increasing the volume of the second hydraulic chamber (P2); whereby when the first main piston is moved towards said retracted position, the volume of said first hydraulic chamber (P1) is decreased, whereby the volume of the second hydraulic chamber is increased, whereby said second main piston moves toward said retracted position; the first and second main pistons comprises a first and second damping valves (108).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai in view of Supalla (U.S. 4,153,237).

Sakai discloses every element of the invention as discussed above except that the hydraulic fluid is synthetic hydraulic oil.

Supalla teaches a suspension unit for a vehicle, wherein the hydraulic fluid is synthetic hydraulic oil (see column 4, line 34).

It would have been obvious design choice to one having ordinary skill in the art at the time the invention was made to modify the suspension system of Sakai by using synthetic hydraulic oil as taught by Supalla in order to effectively absorb impact force on the wheel of the vehicle when traveling on uneven terrain.

Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the suspension system of Sakai by using synthetic hydraulic oil, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of suitability for the intended use as a matter of obvious design choice.

10. Claims 40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai in view of Lillbacka (U.S. 6,253,867).

Sakai discloses every element of the invention as discussed above except that the pneumatic fluid is compressed air.

Lillbacka teaches the invention wherein the pneumatic fluid is compressed air.

It would have been obvious design choice to one having ordinary skill in the art at the time the invention was made to modify the suspension system of Sakai by using

compressed air as taught by Lillbacka in order to effectively absorb impact force on the wheel of the vehicle when traveling on uneven terrain.

Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the suspension system of Sakai by using compressed air or compression spring, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of suitability for the intended use as a matter of obvious design choice.

11. Claims 43 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai in view of Estes (U.S. 3,879,044).

Sakai discloses every element of the invention as discussed above except that the O-ring is made from fluoroelastomer.

Estes teaches the invention wherein the O-ring is made from fluoroelastomer. It would have been obvious design choice to one having ordinary skill in the art at the time the invention was made to modify the suspension system of Sakai by using a fluoroelastomer O-ring for the shock absorbers and the reservoir mechanism as taught by Estes in order to effectively seal the fluid from being leakage such that improving handling capability of the vehicle suspension system.

Allowable Subject Matter

12. Claims 14-17, 19-23, 25, 28-29, 36-37, 44-45 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan C To whose telephone number is (703) 306-5951. The examiner can normally be reached on Mon-Fri (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on (703) 308-2089. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

To, T 

June 10, 2004